

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A scheduler for scheduling data transmission in a communication system, the scheduler comprising:
first logic to determine if each of one or more remote devices corresponding to one or more data transmission indicators has a capacity commitment in an admission profile,
wherein the admission profile is indicative of expected ~~average~~ data requirements for flows already admitted, wherein the expected data requirements comprise an average value; and
second logic to allocate capacity in accordance with a data transmission indicator when a capacity commitment is found, wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators.
2. (Canceled)
3. (Previously Presented) The scheduler of claim 1, wherein the second logic further allocates the remaining capacity, if any, in response to any unsatisfied data transmission indicators in order of increasing size of the unallocated portion of the data transmission indicator.
4. (Original) The scheduler of claim 1, wherein each of a plurality of data transmission indicators is associated with one of a plurality of service levels.

5. (Original) The scheduler of claim 4, wherein the second logic allocates capacity in response to one or more transmission indicators associated with one or more of a first group of service levels in accordance with the admission profile, and allocates remaining capacity, if any, in response to one or more transmission indicators associated with one or more of a second group of service levels.
6. (Original) The scheduler of claim 5, wherein the first group comprises one or more quality of service guaranteed service levels.
7. (Original) The scheduler of claim 5, wherein the second group comprises one or more best effort service levels.
8. (Currently Amended) A communication device, operable with a plurality of remote devices, the communication device comprising:
 - a scheduler for, during each of a plurality of time periods, for each of a plurality of data transmission indicators,
 - determining if a remote device corresponding to the data transmission indicator has a capacity commitment in an admission profile,
 - wherein the admission profile is indicative of expected ~~average~~ data requirements for flows already admitted, wherein the expected data requirements comprise an average value, and wherein the admission profile ~~[[and]]~~ includes the plurality of time periods and a capacity commitment for zero or more remote devices in each of the plurality of time periods, and for
 - allocating capacity in accordance with the data transmission indicator when a capacity commitment is found, wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators.
9. (Canceled)

10. (Previously Presented) The communication device of claim 8, wherein the scheduler further allocates the remaining capacity, if any, in response to any unsatisfied data transmission indicators in order of increasing size of the unallocated portion of the data transmission indicator.
11. (Original) The communication device of claim 8, further comprising a receiver for receiving a request message comprising a data transmission indicator.
12. (Original) The communication device of claim 8, further comprising one or more data queues, a data transmission indicator generated with the presence of data within a queue.
13. (Original) The communication device of claim 8, further comprising a transmitter for transmitting one or more grant messages indicating the allocated capacity.
14. (Original) The communication device of claim 8, further comprising an admissions control unit for:
 - receiving a request for admission comprising flow parameters corresponding to a data flow from a remote device;
 - conditionally admitting the flow when the flow parameters, if combined with the admission profile, would not exceed the system capacity; and
 - modifying the admission profile to incorporate the flow upon admission.
15. (Previously Presented) The communication device of claim 8, wherein each remote device corresponds to a plurality of data transmission indicators, each indicator associated with a service level.
16. (Previously Presented) The communication device of claim 15, wherein the scheduler:

allocates capacity in response to one or more transmission indicators associated with one or more of a first group of service levels in accordance with the admission profile; and

allocates any remaining capacity in response to one or more transmission indicators associated with one or more of a second group of service levels.

17. (Original) The communication device of claim 16, wherein the first group comprises one or more quality of service guaranteed service levels.

18. (Original) The communication device of claim 16, wherein the second group comprises one or more best effort service levels.

19. (Previously Presented) The communication device of claim 15, wherein the scheduler:
allocates the remaining capacity, if any, in response to unsatisfied transmission indicators associated with a first service level; and
then allocates remaining capacity, if any, in response to transmission indicators associated with a second service level.

20. (Original) The communication device of claim 19, wherein the scheduler further allocates remaining capacity, if any, in response to transmission indicators for data in one or more future time periods associated with the first service level prior to the allocation in response to indicators associated with the second service-level.

21. (Original) The communication device of claim 19, wherein the allocation in response to unsatisfied indicators is performed in order of increasing size of the unallocated portion of the data transmission indicator.

22. (Currently Amended) A communication system comprising:
a plurality of remote devices;

an admission profile,
wherein the admission profile is indicative of expected ~~average~~ data requirements for flows already admitted, wherein the expected data requirements comprise an average value, and wherein the admission profile [[and]] comprises a plurality of time periods and a capacity commitment for zero or more remote devices in each of the plurality of time periods; and
a communication device comprising a scheduler for, during each of the plurality of time periods, for each of a plurality of data transmission indicators, determining if a remote device corresponding to the data transmission indicator has a capacity commitment in the admission profile and for allocating capacity in accordance with the data transmission indicator when a capacity commitment is found, wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators.

23. (Currently Amended) A method for scheduling, comprising:
receiving, at a device with a scheduler, one or more transmission requests from one or more remote devices; and
granting one or more of the transmission requests in accordance with an admission profile,
wherein the admission profile is indicative of expected ~~average~~ data requirements for flows already admitted, wherein the expected data requirements comprise an average value, wherein the admission profile [[and]] includes a capacity commitment for the one or more remote devices, and wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators.

24. (Original) The method of claim 23, further comprising:
receiving a request for admission comprising flow parameters corresponding to a data
flow from a remote device;
conditionally admitting the flow when the flow parameters, if combined with the
admission profile, would not exceed the system capacity; and
modifying the admission profile to incorporate the flow upon admission.
25. (Currently Amended) A method for scheduling, comprising:
determining, at a device with a scheduler, for each of a plurality of time periods and for
each of a plurality of data transmission indicators, whether a remote device
corresponding to the data transmission indicator has a capacity commitment in an
admission profile,
wherein the admission profile is indicative of expected ~~average~~ data requirements for
flows already admitted, wherein the expected data requirements comprise an
average value; and
allocating capacity in accordance with the data transmission indicator when a capacity
commitment is in the admission profile, wherein capacity is allocated for remote
devices with capacity commitments in the admission profile limited to their
capacity commitments before remaining capacity is allocated to any unsatisfied
data transmission indicators.
26. (Original) The method of claim 25, wherein one or more of the data transmission
indicators are received from one or more remote devices.
27. (Original) The method of claim 25, wherein one or more of the data transmission
indicators are generated in response to the presence of data within a queue.

28. (Original) The method of claim 25, wherein each of the plurality of data transmission indicators corresponds to one of a plurality of service levels.
29. (Previously Presented) The method of claim 28, wherein capacity is allocated first for data transmission indicators corresponding to a first service level, and the remaining capacity, if any, is allocated to transmission indicators corresponding to one or more second service levels.
30. (Currently Amended) A method for scheduling, comprising:
receiving, at a device with a scheduler, a plurality of transmission indicators
corresponding to a plurality of remote devices;
accessing an admissions profile to determine if one or more transmission indicators have
an associated commitment in the admissions profile,
wherein the admission profile is indicative of expected ~~average~~ data requirements for
flows already admitted, wherein the expected data requirements comprise an
average value;
allocating capacity according to the remote devices with located commitments limited to
their capacity commitments before allocating remaining capacity to any
unsatisfied transmission indicators;
allocating remaining capacity to remaining transmission indicators; and
transmitting one or more grant messages in accordance with the capacity allocation.
31. (Currently Amended) A device, comprising:
means for receiving one or more transmission requests from one or more remote devices;
and
means for granting one or more of the transmission requests in accordance with an
admission profile,
wherein the admission profile is indicative of expected ~~average~~ data requirements for
flows already admitted, wherein the expected data requirements comprise an

average value, wherein the admission profile [[and]] includes a capacity commitment for the one or more remote devices, and wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators.

32. (Original) The device of claim 31, wherein the admission profile comprises a plurality of frames, and zero or more capacity values associated with a remote device per frame.

33. (Original) The device of claim 31, wherein the admission profile is created in accordance to a duty factor and a frame phase for one or more data flows.

34. (Original) The device of claim 31, further comprising:
means for receiving a request for admission comprising flow parameters corresponding to a data flow from a remote device;
means for conditionally admitting the flow when the flow parameters, if combined with the admission profile, would not exceed the system capacity; and
means for modifying the admission profile to incorporate the flow upon admission.

35. (Currently Amended) A communication system comprising:
means for determining, at a device with a scheduler, for each of a plurality of time periods and for each of a plurality of data transmission indicators, whether a remote device corresponding to the data transmission indicator has a capacity commitment in an admission profile,
wherein the admission profile is indicative of expected ~~average~~ data requirements for flows already admitted, wherein the expected data requirements comprise an average value; and

means for allocating capacity in accordance with the data transmission indicator when a capacity commitment is in the admission profile, wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators.

36. (Currently Amended) A non-transitory computer-readable medium embodying executable instructions for:

receiving one or more transmission requests from one or more remote devices; and
granting one or more of the transmission requests in accordance with an admission profile,

wherein the admission profile is indicative of expected ~~average~~ data requirements for flows already admitted, wherein the expected data requirements comprise an average value, wherein the admission profile ~~[[and]]~~ includes a capacity commitment for the one or more remote devices, and wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators.

37. (Currently Amended) The non-transitory computer-readable medium of claim 36, further comprising instructions for:

receiving a request for admission comprising flow parameters corresponding to a data flow from a remote device;
conditionally admitting the flow when the flow parameters, if combined with the admission profile, would not exceed the system capacity; and
modifying the admission profile to incorporate the flow upon admission.

38. (Currently Amended) A non-transitory computer-readable medium embodying executable instructions for:

determining, at a device with a scheduler, for each of a plurality of time periods and for each of a plurality of data transmission indicators, whether a remote device corresponding to the data transmission indicator has a capacity commitment in an admission profile,

wherein the admission profile is indicative of expected ~~average~~ data requirements for flows already admitted, wherein the expected data requirements comprise an average value; and

allocating capacity in accordance with the data transmission indicator when a capacity commitment is in the admission profile, wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators.